AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A cyclone system for disengaging solid and gaseous particles which is in association with a FCC ~~processes with reduced~~ reactor and which reduces coke formation in a disengager ~~vessels~~vessel that receives a catalyst/load mixture from a riser, comprising at least one legless cyclone [[42]] connected to at least one cyclone [[47]] in consecutive stages through concentric pipes ~~46a, 46b~~, wherein the ~~system has a~~ at least one legless cyclone [[42]] is fitted with at least one collector pipe [[43]] outside the at least one legless cyclone [[42]].

2. (currently amended): The system of claim 1, wherein ~~it~~ the system reduces coke formation inside the disengager ~~vessels~~ vessel without causing spent catalyst to be released inside the system.

3. (currently amended): The system of claim 1, wherein ~~it~~ the system maintains the overall efficiency of the disengagement and the integrity of the cyclones during run time.

4. (currently amended): The system of claim 1, wherein the at least one collector pipe [[43]] is positioned outside to keep ~~the~~ spent and previously disengaged catalyst from being released into the cyclones in consecutive stages.

5. (currently amended): The system of claim 1, wherein the at least one collector pipe [[43]] has a device ~~of a suitable shape~~ at its end to keep ~~the~~ spent and previously disengaged catalyst from being released into the at least one cyclone [[47]] in consecutive stages.

6. (currently amended): The system of claim 1, wherein ~~the~~ a connection between the concentric pipes ~~46a, 46b~~ that interconnect the cyclones in different and consecutive stages is fitted with a telescoping joint [[45]] with minimized annular space.

7. (currently amended): The system of claim 1, wherein ~~as an alternative the~~ a connection between the concentric pipes ~~46a, 46b~~ interconnecting the cyclones in different and consecutive stages is fitted with a sealed telescoping joint.

8. (currently amended): The system of claim 1, wherein ~~as an alternative the~~ a connection between the concentric pipes ~~46a, 46b~~ interconnecting the cyclones in different and consecutive stages has no telescoping joint.

9. (currently amended): The system of claim 1, wherein ~~the~~ a lower nozzle of the at least one legless cyclone [[42]] is fitted with distributors [[42a]] of solids.

10. (currently amended): The system of claim 1, wherein ~~the~~ a lower nozzle of the at least one legless cyclone [[42]] has no distributors of solids.

11. (currently amended): The system of claim 1, wherein ~~it~~ the system comprises at least one flow distributor [[46]] between cyclones in the same stage.

12. (currently amended): The system of claim 1, wherein ~~it~~ the system comprises at least one flow distributor [[46]] between cyclones in different stages.

13. (currently amended): The system of claim 1, wherein ~~it~~ the system has no flow distributors [[46]] between cyclones in equal stages.

14. (currently amended): The system of claim 1, wherein ~~it~~ the system has no flow distributors [[46]] between cyclones in different stages.

15. (currently amended): The system of claim 1, wherein each stage comprises at least one external collector pipe[[43]].

16. (currently amended): The system of claim 1, wherein ~~it~~ the system further comprises at least one purge liquid injector device[[40]].

17. (withdrawn-currently amended): A process for disengaging solid and gaseous particles in ~~processes~~ a process for ~~the~~ fluid catalytic cracking (FCC) of hydrocarbons, ~~reducing~~ which reduces coke formation in a disengager ~~vessels~~vessel, by using the system ~~in accordance with~~ of claim 1, said process comprising ~~the following steps~~:

a) feeding a suspension made up of cracking reaction products mixed with ~~the~~ a catalyst in ~~a closed~~ the cyclone disengaging system for fostering the disengaging of gaseous and particulate phases, with ~~the~~ a gaseous current flowing into ~~the~~ a fractionation system through an outlet duct[[48]];

b) collecting ~~the~~ a particulate phase in the bottom of the disengager vessel[[49]], from where it flows to ~~the~~ a rectification and regeneration zone;

c) purging ~~the~~ stagnated areas of the disengager vessel [[49]] by injecting purge liquid through ~~the~~ an injector ~~devices 40~~device; and

d) draining off ~~the~~ hydrocarbons recovered in ~~the~~ a rectifier and ~~the~~ steam injected into the disengager vessel and the rectifier, ~~said process comprising the following:~~

wherein, in ~~In~~ stage d), ~~the~~ gases coming from the disengager vessel [[49]] are drained off through the at least one collector pipe [[43]] outside the at least one legless cyclone[[42]],

avoiding the passage of hydrocarbons into the top of the disengager vessel, ~~with its~~ which has a lower temperature[[;]], and

~~In~~ in stage b), a minimum of the catalyst disengaged through the lower nozzle of the at least one legless cyclone [[42]] is released by the gases drained off through the at least one ~~external~~ collector ~~pipes 43~~pipe.

18. (withdrawn-currently amended): The process of claim 17, wherein the at least one ~~external~~ collector pipe [[43]] captures the gases coming from the disengager vessel[[49]], in a location close to the lower nozzle of the at least one legless cyclone[[42]], the at least one collector pipe [[43]] rising outside of and parallel to the at least one legless cyclone [[42]] and discharging the gases collected inside the concentric pipes ~~46a, 46b~~.

19. (withdrawn-currently amended): The process of claim 17, wherein ~~the~~ annular space of the concentric pipes ~~46a, 46b~~ allows for potential thermal expansion of the system.

20. (withdrawn-currently amended): The process of claim 17, wherein a connection between the concentric pipes that interconnect the cyclones in different and consecutive stages is fitted with a telescoping joint, and the telescoping joint ~~45 between the concentric pipes 46a, 46b~~ allows for thermal expansion of the system.

21. (withdrawn-currently amended): The process of claim 17, wherein ~~any commercially available~~ an expansion joint allows for thermal expansion of the system.

22. (withdrawn-currently amended): The process of claim 17, wherein the process minimizes the route taken by hydrocarbons coming from the rectifier in the disengager vessel [[49]] until being captured by the at least one collector ~~pipes 43~~ pipe and carried to ~~the~~ piping with an outlet above the at least one legless cyclone[[42]].

23. (withdrawn-currently amended): The process of claim 17, wherein the process minimizes access by the hydrocarbons coming from the rectifier in the area of the disengager vessel [[49]] ~~with~~ having a lower temperature, which lies between the lower end of the at least one legless cyclone [[42]] and the top of the disengager vessel[[49]], whereby coke formation is reduced.

24. (withdrawn-currently amended): The process of claim 17, wherein the hydrocarbons coming from the rectifier are collected in a warmer area of the disengager vessel [[49]], thus preventing coke from being deposited in said disengager vessel.

25. (currently amended): The ~~device~~ system of claim 1, wherein ~~the~~ an upper end of ~~said external~~ the at least one collector pipe [[43]] opens up into the concentric pipes ~~46a, 46b,~~ above the at least one legless cyclone[[42;]].

26. (currently amended): The ~~device~~ system of claim 1, wherein ~~said external~~ the at least one collector pipe [[43]] points vertically downward[[;]].

27. (currently amended): The ~~device~~ system of claim 1, wherein ~~the~~ a lower end of ~~said external~~ the at least one collector pipe [[43]] opens up into the disengager vessel[[49;]].

28. (currently amended): The ~~device~~ system of claim 1, wherein ~~said external~~ the at least one collector pipe [[43]] allows for various shapes that prevent the release of catalyst into the at least ~~the~~ one cyclone [[47]] in consecutive stages.

29. (withdrawn-currently amended): The ~~device~~ system of claim ~~24~~1, wherein at least one collector pipe [[43]] is installed in such a way as to keep ~~the~~ spent and previously disengaged catalyst from being released into ~~the~~ cyclones in consecutive stages.